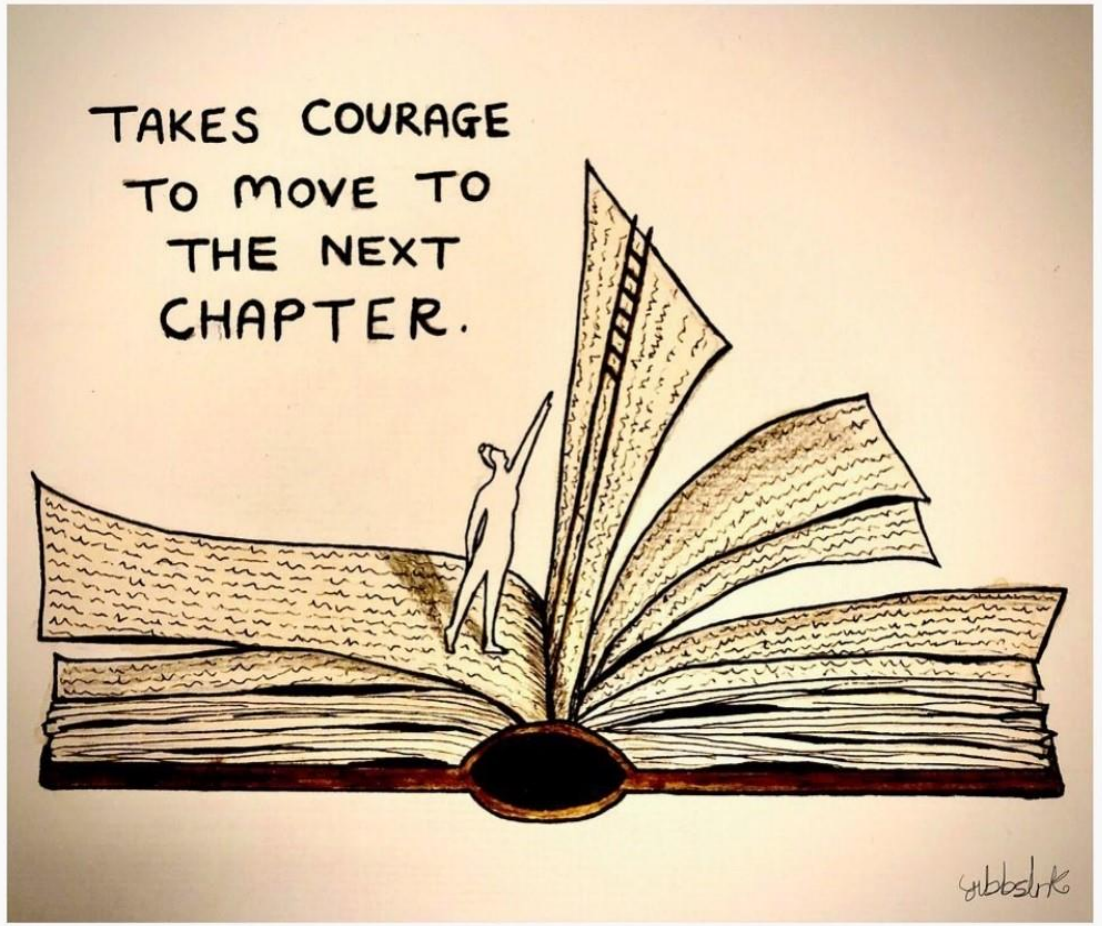
universität freiburg

M.Sc. Microsystems Engineering

Introduction

Faculty of Engineering
IMTEK
Svenja Andresen, Programme Coordinator
Freiburg, 09/10/2025

IMTEK



Credits:Instagram, @gibbs_ink

Agenda

1. Organization
2. Administration
3. Important info and rules regarding exams
4. Where to find information and help

About me

Svenja Andresen

- Programme Coordinator for Microsystems Engineering
- Phone: +49 761 203 97940
- studiengangkoordination.mst@imtek.uni-freiburg.de

Consulting hours via phone: **Tuesday & Thursday 9:30-11:30**, on site/via Zoom:
best by prior appointment

More info on consulting hours and changes:
https://www.tf.uni-freiburg.de/de/studienangebot/studienberatung

Academic Advisors

Dr. Jochen Kieninger

- Phone: +49 761 203 7265
- On Sabbatical until 04/2026

Dr. Oswald Prucker

- Phone: +49 761 203 7164

E-Mail: studienberatung@imtek.de

1. Organization

Curriculum

Some important terms

Modules

building blocks of the syllabus

- Consist of various elements (different symbols/icons in study planner)
- Credits are given for the complete module, no „partial credits“

Courses in the MSE program:

- Lectures –Vorlesung (V)
- Exercises –Übung (Ü)
- Lab courses –Praktikum/ Praktische Übung (Pr)
- Seminars –Seminar (S)
- Projects (P)

Curriculum
Some important terms

Graded assessments or pass/fail: 

Coursework or pass/fail assessments (“Studienleistungen”, SL)

- Part of a module or final assessment
- May be graded, or only “pass” or “fail”
- Not part of the final grade
- No negative consequences if failed (apart from having to repeat →“time penalty”)

Graded assessments /Exams (“Prüfungsleistungen”, PL) 

- Always graded
- Always counts towards the final grade
- Strict rules/regulations and limited number of attempts

Curriculum
At a glance…

- 5 Compulsory courses

  30 ECTS
- Advanced Microsystems: 5 out of 8 modules

  30 ECTS
- Concentration Areas

  30 ECTS
- Customized Course Selection

  9 ECTS
- Master‘s thesis

  30 ECTS

- You are not allowed to take more courses than necessary to meet these requirements

- **In general, you have to plan so you hit the 90 credits exactly**

Mandatory modules

Module	Type	Exam	ECTS	Semester
Micro-electronics	Le-E	Written exam	6	1
Micro-mechanics	Le+E	Written exam	6	1
MST Design Laboratory I for Microsystems Engineering	La	Pass/Fail assessment (Studienleistung)	6	1
MST Technologies and Processes	L+E	Pass/Fail assessment (Studienleistung) Written exam	6	1
Signal Processing	L+La	Written exam	6	2
Master‘s module		Thesis and presentation	27+3	4

Compulsory elective modules

Module	Type	Exam	ECTS	Semester
Assembly and Packaging Technology	Le+E	Writen exam	6	1, 2 or 3
Mirco-optics	Le+E	Written exam	6	1 or 3
Modelling and System Identification	Le-E	Written exam	6	1 or 3
Probability and Statistics	Le-E	Written exam	6	1 or 3
Sensors	Le+La	Pass/fail assessment Written exam	6	1 or 3
Biomedical Microsystems	Le+E	Written exam	6	2
Micro-actuators	Le+E	Pass/fail assessment Written exam	6	2
Micro-fuidics	Le+E	Written exam	6	2
Total to be selected			**30**	

Concentration Areas in Microsystems Engineering

- **You choose ONE area**

The four concentration areas are:

- Circuits and Systems
- Biomedical Engineering
- Materials and Fabrication
- Photonics

Concentration Areas and Customized Course Selection

Concentration Areas (21-30 ECTS)	ECTS
Circuits and Systems	**Students have to choose ONE concentration area**
Materials and Fabrication	
Biomedical Engineering	
Photonics	
Total	**21-30**
Customized Course Selection	**ECTS**
Courses from the MSE concentrations, other faculties at the University of Freiburg, also courses on German language, scientific writing, project management	**Students can choose either 30 concentration or 21 concentration+9 CCS**
Total	**9**

Customized Course Selection

Instead of completing all 30 ECTS from your chosen concentration area, you can earn 9 ECTS in the Customized Course Selection

Here, you can choose from

- Courses from the MSE concentrations
- Scientific writing or project management in MSE
- Language courses (esp. German courses from SLI for international students) (please note: **not** from the „Zentrum für Schlüsselqualifikationen“!/BOK area)
- Selected courses from other departments /faculties, like from the Economics Department *(not in study planner – application required)*

Be aware that the rules regarding the Customized Course Selection are different in the ESE study program, when talking to other students or lecturers!

Optional Specialization

You can choose to do a specialization in your study programme (which will be shown on the final documents). There are 4 specializations available:

- Circuits and Systems
- Materials and Fabrication
- Biomedical Engineering
- Photonics

The requirements are:

- **You have to take courses with 30 ECTS from the according specialization**
- **You have to do a Master Thesis with a related topic**

Master‘s Thesis

- Master thesis (27 ECTS) graded
- Colloquium (= Presentation/ Defense; 3 ECTS) graded

Admission to thesis: you need at least 72 ECTS credits

- Duration: 6 months

More info: https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq/thesis

2. Administration

Advice and recommendations

- Most courses are offered every other semester (i.e. once a year); some might be held more irregularly; this should be mentioned in the module handbook (please see HISinOne or PDF)
- Overlapping of courses: with the huge amount of courses offered, this unfortunately happens
- Be aware that you might need to adapt your original study plan
- Usually no dependencies regarding order of courses
- However, check with lecturers for appropriate combinations or recommended order of courses
- Most prerequisites stated in the course catalogue are recommendations, they are not mandatory, but some are→ please read the description!

Next steps

- Study the course catalogue / planner of studies (What courses are offered right now?)
- Check out a few more courses than you intend to complete in the given semester
- Register (via HISinOne→ “Booking of courses”) for the courses you want to take as soon as possible
- Information on dates and deadlines for course booking:
https://www.tf.uni-freiburg.de/en/studies-and-teaching/calendar-dates

→ Booking deadlines for Bachelor and Master courses

- **Read the official exam regulations! (= terms and conditions of your study program)**

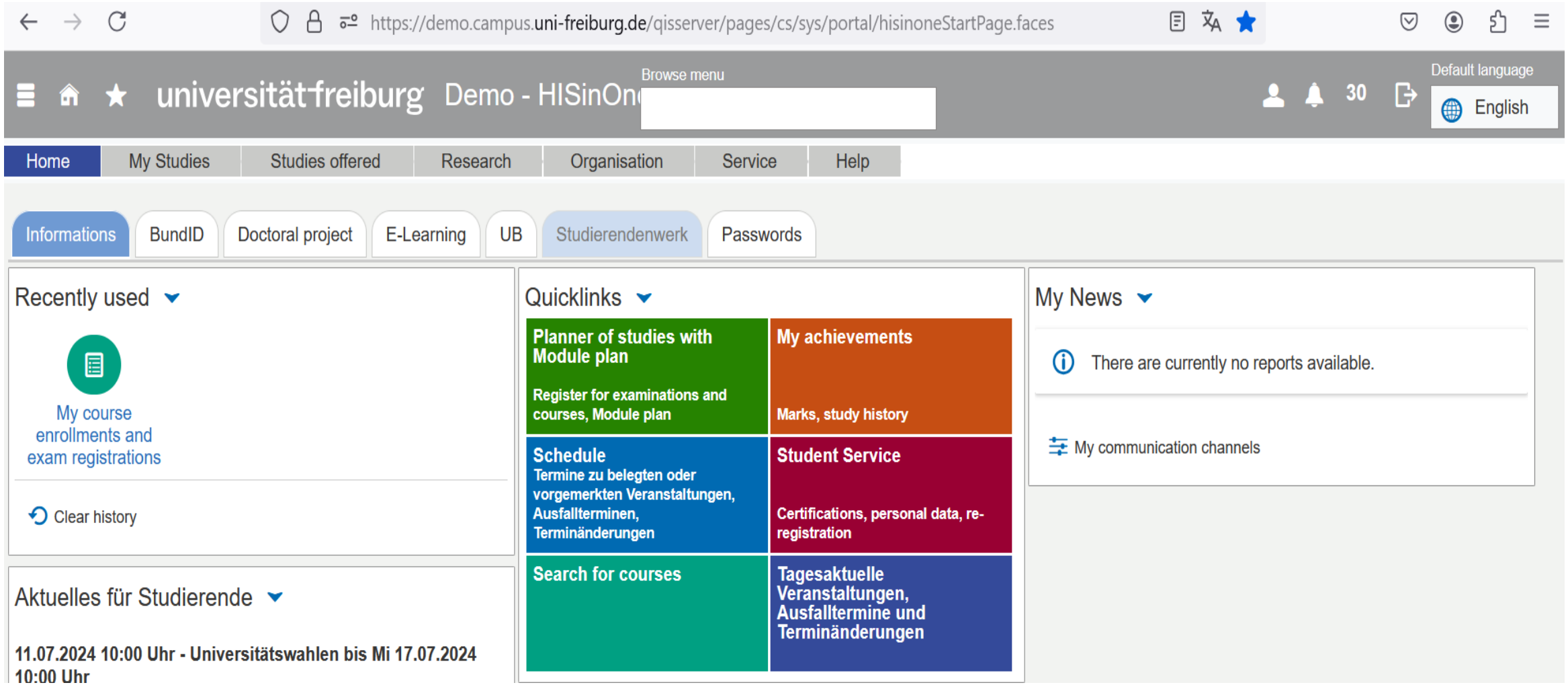
A non-binding English translation of the MSE exam regulations can be found here.

Course booking

- Have a look at your *planner of studies* https://campus.uni-freiburg.de
- If you have questions or made a mistake while booking: **Contact** Ms. Moses in the Dean‘s office: moses@tf.uni-freiburg.de or myself*(Screenshots are really helpful)*
- Booking periods can always be found here: https://www.tf.uni-freiburg.de/en/studies-and-teaching/calendar-dates
- → Booking deadlines and seat allocation for Bachelor and Master courses

- **Be aware: Different course types have different deadlines!**
- If you forgot to book a course: contact the lecturer and ask if there are still seats available and if it generally makes sense to start late
- The examination office **can‘t** help you with this!
- *Please note: Registration for an exam in HISinOne can be confusing if you did not book the course beforehand!*

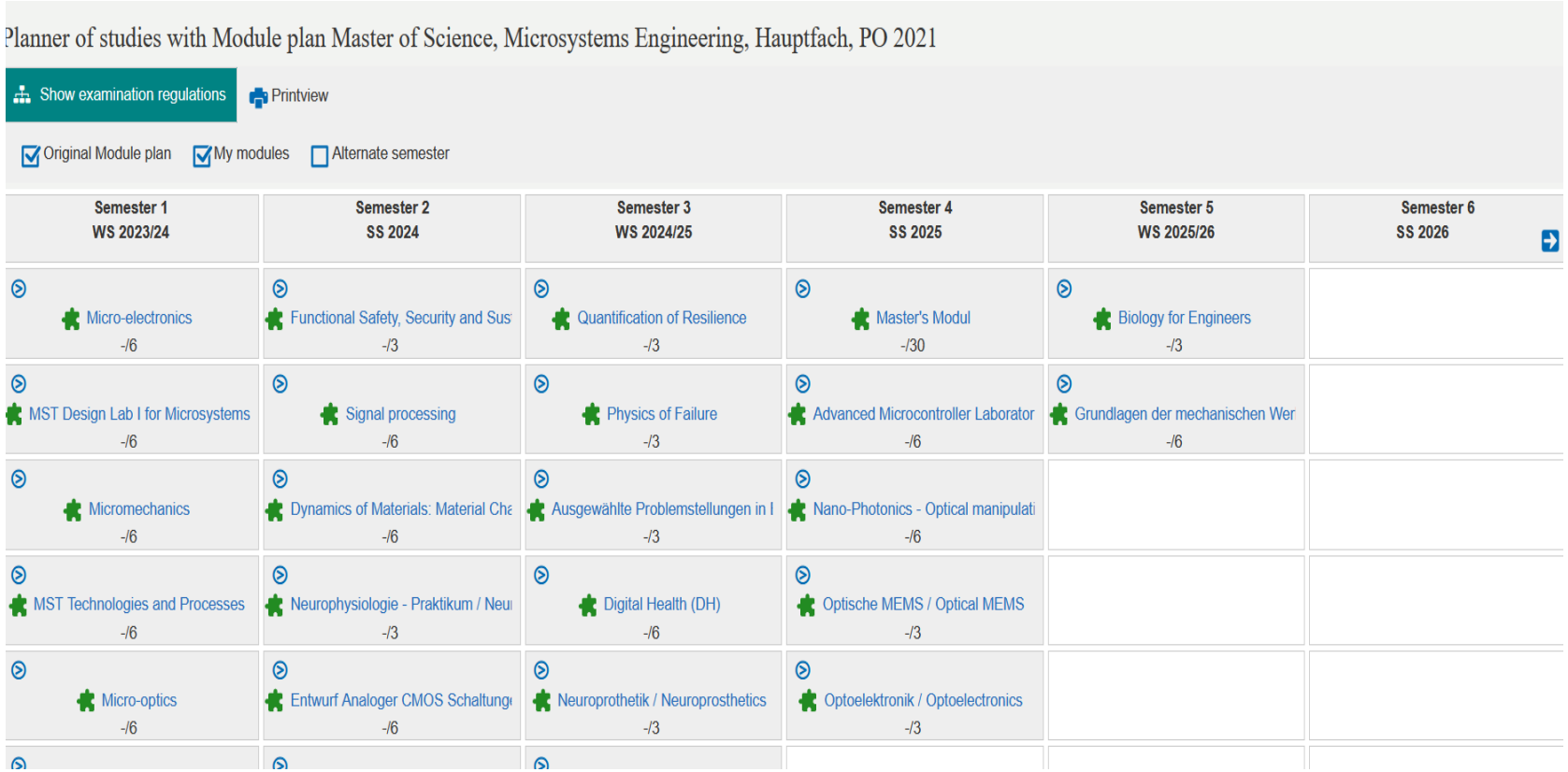
Course booking/HISinOne Demo



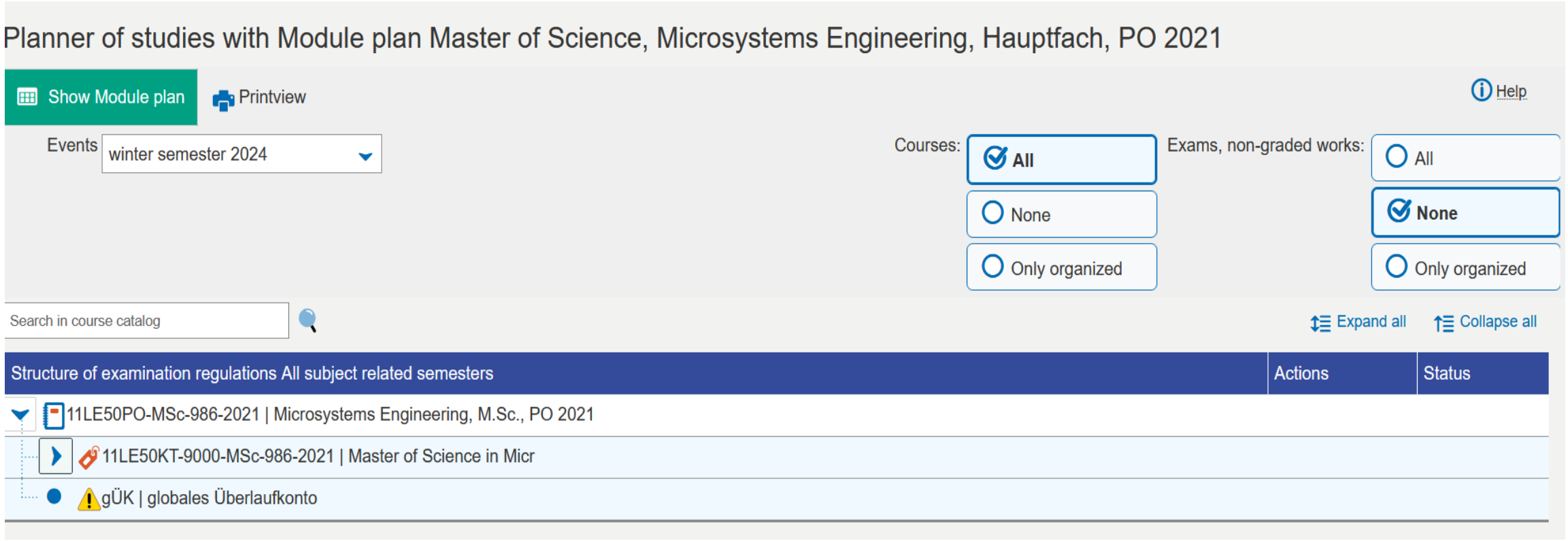
Course booking Wiki/HISinOne Demo

- Login to https://campus.uni-freiburg.de/

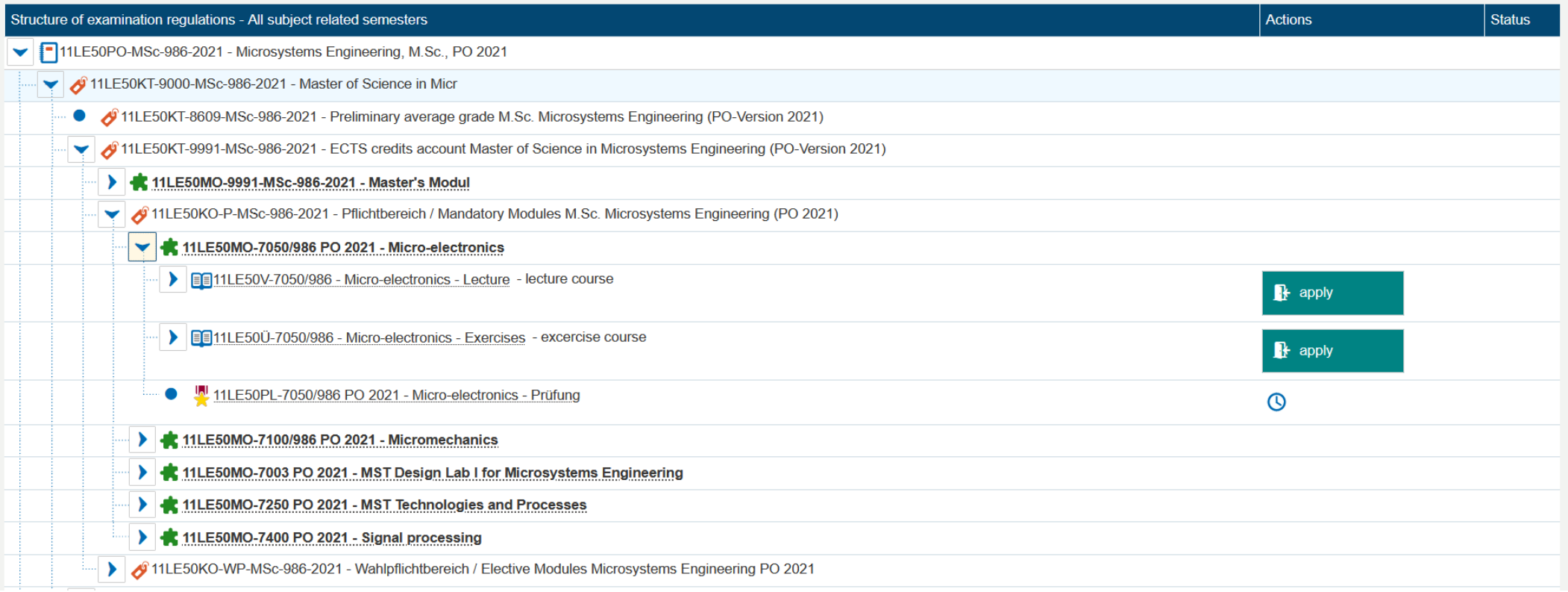
Course booking Wiki/HISinOne Demo



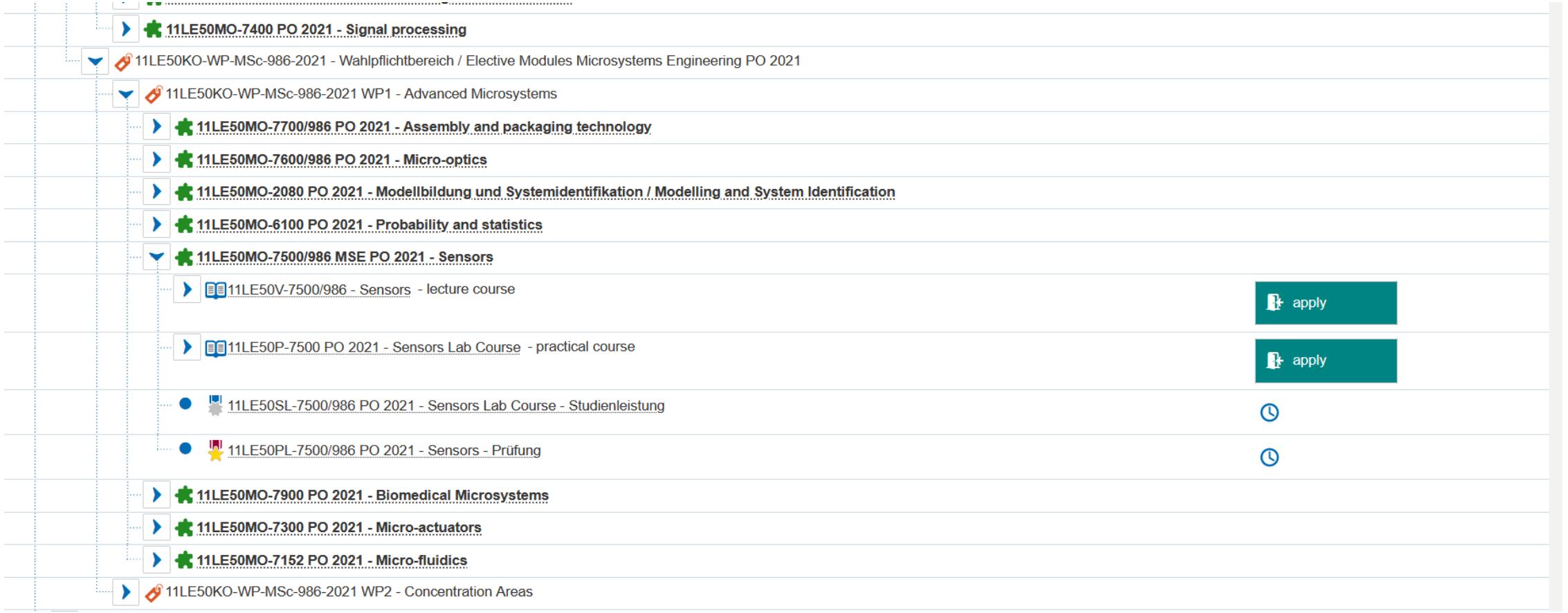
Course booking Wiki/HISinOne Demo



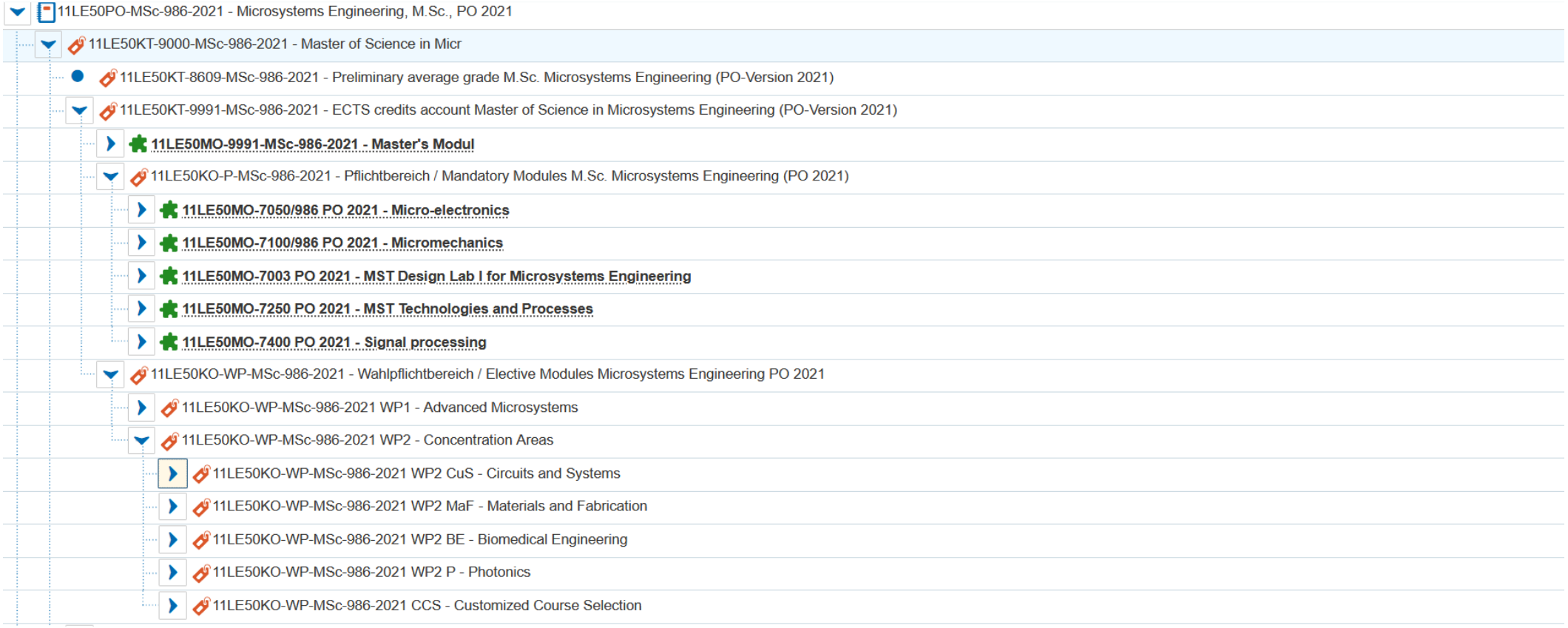
Course booking Wiki/HISinOne Demo-Mandatory Modules



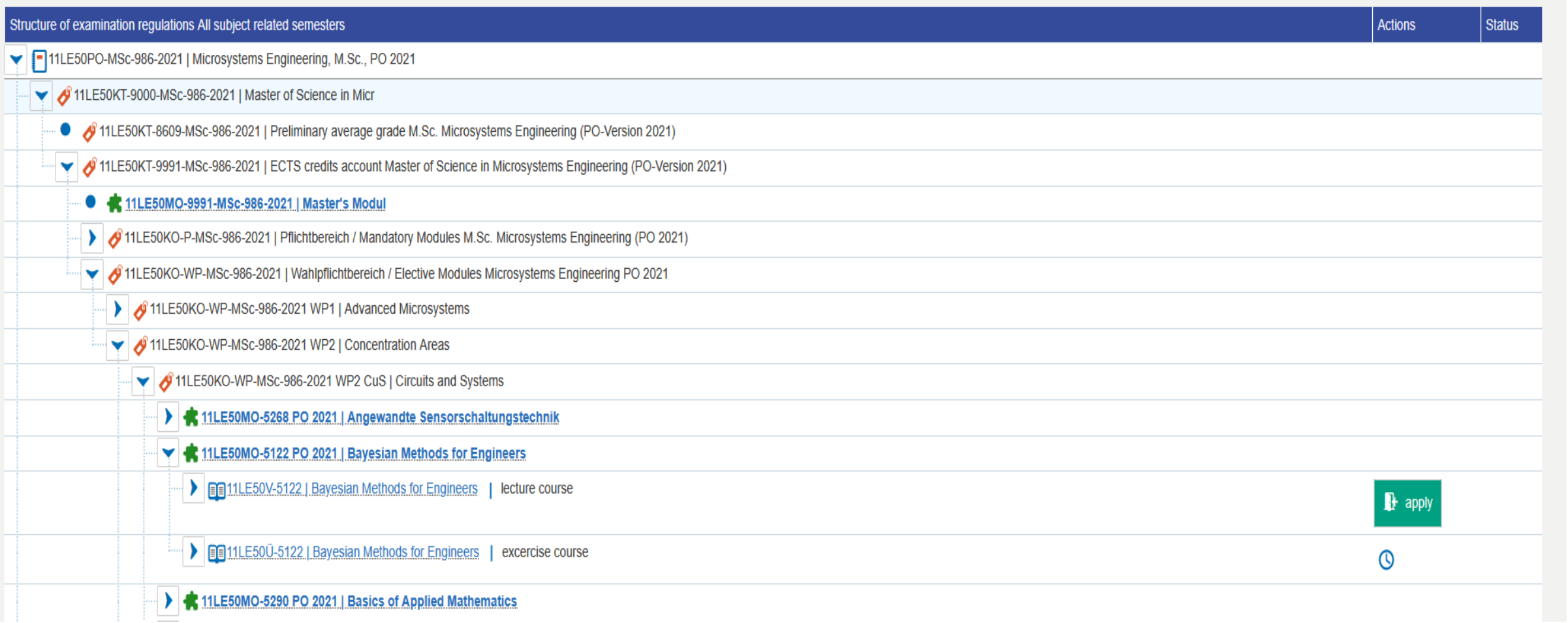
Course booking Wiki/HISinOne Demo Advanced MSE



Course booking Wiki/HISinOne Demo Concentrations



Course booking Wiki/HISinOne Demo Concentrations



Course booking Wiki/HISinOne Demo-Customized Course Selection

3. Important info and rules regarding exams

More details will be offered by the examination office team in a presentation in November. You‘ll receive an invitation e-mail within the next couple of weeks.

Registration: Exams/Graded Assessments (PL)

This is another, independent step from booking the course. It's not done automatically.

- The procedure is *similar* to booking the courses. For a how-to, see https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq/examinations
- **Deadlines for the registration** (and de-registration) for exams are also mentioned on this website
- Without registering for an exam you are not allowed to take it, so please **do not forget!**
- To make sure you are correctly registered, we recommend saving the pdf of the registration confirmation in HISinOne→ My studies→My course enrollments and exam registrations

How to proceed if you failed an exam

Number of attempts are limited:

- 2 attempts for every exam / graded assessment (if needed)
- **2 oral or written exams** can be attempted **3 times**

- You are registered automatically for the repetition(s) and **cannot sign off.**

- Repetition exams will take place in the next semester

- You can substitute **1 course** (from Advanced MSE or the concentration) you failed the exam/ graded assessment with another one (but it has to be done after the **first** failed attempt)

Grade improvement

- Repeating an exam that you have passed, to improve your mark, is possible **in one module** you did **in your first year** of studies here
- This rule applies only to written or oral exams (not other kinds like homework or presentations)
- You have to take the „repetition“ exam **directly in the following semester**
- The examination with the better grade will be considered official

Missing an exam: Unexcused or authorized withdrawals

If you do not attend an exam that you registered for, it counts as failed, unless you have a valid excuse

- Valid excuses can be
  - Due to illness→ Doctor‘s note required, see https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq
  - Due to emergencies in family etc. (please contact examination office immediately)

4. Finding information and help

Students are responsible to stay informed

You are independent persons, expected to (mostly) self-organize and self-motivate. There is no service establishment catering to all your needs.

We provide the necessary information through different sources:

- Websites
- Introductory events
- Official documents (like exam regulations)
- Information emails **(Make sure to have access to your faculty user account and forward or use that e-mail adress!)**

Reading is essential! Please read! The whole text, all the lines in an email, the complete instructions in exercise or exam sheet…

„I did not know!“ is not an acceptable excuse!

Information resources

- Faculty of Engineering: https://www.tf.uni-freiburg.de/en/studies-and-teaching
- Calendar, dates and deadlines: https://www.tf.uni-freiburg.de/en/studies-and-teaching/calendar-dates
- Programme website: https://www.tf.uni-freiburg.de/en/study-programs/microsystem-engineering/m-sc-microsystems-engineering-en?set_language=en
- Information for new students: https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq/freshers-info
- A to Z –Study FAQ https://www.tf.uni-freiburg.de/en/studies-and-teaching/a-to-z-study-faq

When writing an e-mail to an advisor or the examination office…

- Please use a sensible subject
- Assume we do not know you, and the crystal ball is usually a bit misty ☺
- So, please sign the email with your full name; your matriculation number can also be helpful, and it would be great if you mention your study programme
- Use full names of professors, supervisors or lecturers (we are not on first name base with everyone at the faculty)
- For a question about a new topic: Write a new mail and address it (correctly) yourself. Don’t “answer” to older information mails from us
- If it is urgent, indicate this in the subject line! Our responses to mails not classified as urgent can take quite a while and we try to prioritize

Reach out…

If you have any queries or problems: please try to reach out as soon as possible.

- **Contacts & information sources:**
  - Official information sources by university, faculty and study programme
  - Study advisors and programme coordinator - Contact information for advisory services at TF: https://www.tf.uni-freiburg.de/en/study-programs/counseling
  - Mentors
  - Lecturers / assistants (face-to-face or via e-mail)
  - Fachschaft TF (student committee of this faculty)
  - Information centers like the Student Service Center/Central Academic Advising Office, IAS, Office of Student Services, SWFR, Counselling services, Nightline etc.
  - fellow students

Credits: Instagram, Roberto Ferraro Art

Gegen sexuelle Belästigung, Gewalt und Stalking

Against Sexual Harassment, Violence, and Stalking

Foto:The KonG – stock.adobe.com

Beratung? Counselling?

+49 761 203-4222

+49 152 22928696

www.gleichstellungsbuero.uni-freiburg.de

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Let‘s go!

Starting into your studies with information from the Service Center Studium

Wintersemester 2025/26
Service Center Studium - Sedanstr. 6
www.studium.uni-freiburg.de

When to seek advice from whom?

Subject-related:

Professors/Teaching staff

e.g. questions about content, literature and learning materials, methods, etc.

Subject coordinators

e.g. study planning, decisions, choosing majors, examination regulations, credit transfer, etc.

Other study-related questions and beyond:

Zentrale Studienberatung (Advising and Counselling)

at Service Center Studium (Sedanstr. 6)

e.g. motivation, reorientation, decision-making, learning process, study organisation, stress, crises, etc.

- Confidential, anonymous if necessary, open-ended
- If necessary, referral to other contacts (representatives for students with chronic illnesses/disabilities, psychotherapeutic counselling centre, employment agency, etc.)

→ **www.zsb.uni-freiburg.de**

What to do when things get tough? Turbulence during your studies

- Perplexity, doubt and crises are normal parts of studying:
- sometimes it is just a brief irritation, sometimes there is more to it than that. There are many helpful people to talk to at the university; the SCS will help you or find the right people for you.
- **Resources for mental health**
- If necessary, sooner rather than later:

ask questions
get support
try out

In case of emergency

- Emergency number 112
- https://uni-freiburg.de/en/university/emergency-assistance/
- https://uni-freiburg.de/en/university/equity-diversity-inclusion/contact-persons/

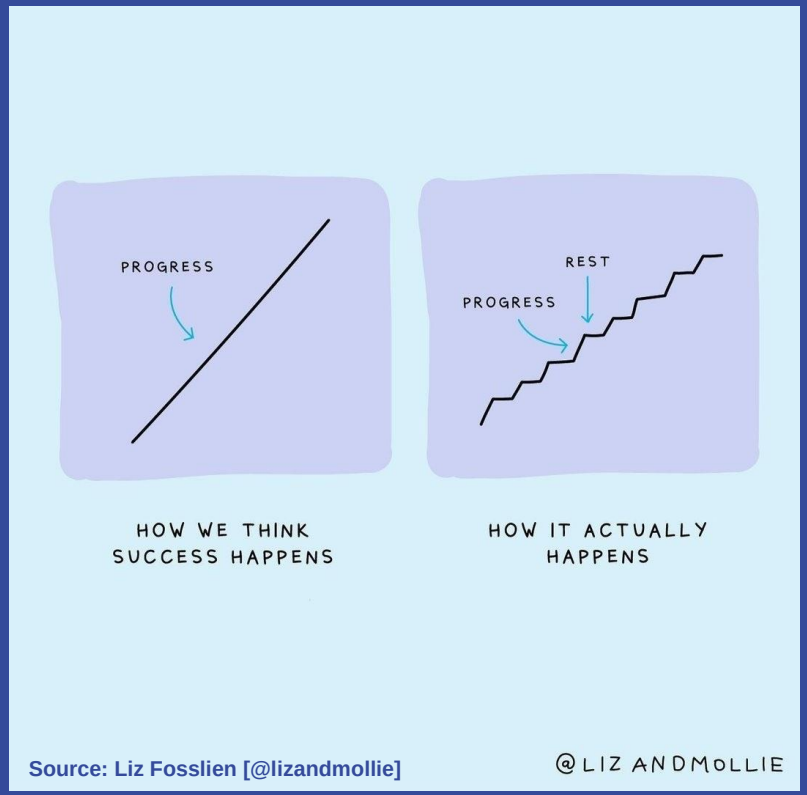
- PBS: Psychotherapeutic Counselling of the Studierendenwerk

  www.swfr.de/en/ → follow button „Support“
- In acute emergencies:
  - Outpatient clinic of the university hospital for psychiatry and psychotherapy, Hauptstraße 5, Freiburg
    Tel: 0761/270-65 500, -65 010, -65 020
  - Emergency practice of the Association of Statutory Health Insurance Physicians BW at the University Hospital, Erdgeschoss, Hugstetter Str. 55, Freiburg
    Tel: 116 117 (mon/tue/thu 20.00-6.00; wed/fri 16.00-6.00; sat/sun/holiday 0.00-24.00)

Thank you for your attention. Wishing you a good start!

Campus tour this afternoon at around 4:00 p.m.

Meeting point: in front of lecture hall 026 ☺



Source: Liz Fosslien [@lizandmollie]